

# ptx C 4

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## Manual

## **Dear client**

**Thank you very much for buying the German engineered **ptx system**. We are very pleased you made the decision to use our products.**

**Pyrotronix Show Control Systems assures you state of the art equipment with components designed for reliable performance indoor and outdoor. The rugged components of the **ptx system** offers the firework-designer enormous set up possibilities as well as an easy and simple work flow from the show script till the set up.**

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# 1 General Safety Instructions

The correct order of setting up and connecting **ptx system** is mandatory for every user in order to achieve the highest degree of safety. At the beginning of the setting up process please ensure that the control panel key is with the responsible person.

**ptx system** must only be operated with original equipment and accessories manufactured by Pyrotronix Show Control Systems, Germany. The use of non-original equipment may result in the malfunction of the **ptx system**. Misuse of the **ptx system** may lead to property damage or personal injury. The **ptx system** is designed for professional use only.

Professional fireworks/pyrotechnic operators shall only use the system in a controlled professional environment permitted by the authority having jurisdiction. **ptx system** shall only be used to ignite pyrotechnics and fireworks. Connecting components or effects to the system is only allowed, when no power source is connected to the system whenever you are setting up, connecting or adding components or effects.

This also applies to every kind of work with fireworks/pyrotechnic devices.

Before using **ptx system** and effects in public places, the necessary notifications/ permissions must be obtained from the responsible authorities. When working in close proximity to people, staging, scenery or similar things it is very important that safety standards be closely followed. Familiarity with, staging, scenery, or similar things is necessary to maintain appropriate safety standards.

Smoking and open flames or lights shall be banned in the pyrotechnic/fireworks area. You shall be familiar with the fire alarm, detection and suppression systems.

Observe the safety instructions in this manual. Observe the safety instructions of the fireworks/pyrotechnic effects and respect the recommend safety distances. The operating technician must have an unrestricted view to the firing position as well as to the whole fireworks/pyrotechnic area. Never put your face or other parts of your body over fireworks/pyrotechnic effects with armed ignition boxes. Maintain the appropriate distance of separation for the effect or firework being used when **ptx Ignition System** gets powered.

The specific procedures pertaining to the use and operation of the **ptx Ignition System** are outlined in the user manual. Deviation from any of the procedures outlined in this manual are specifically forbidden and not recommended by Pyrotronix GmbH. Any deviations to the procedures as outlined in the user manual may result in property damage or personal injury. Any deviations to the procedures as outlined in the user manual is considered a misuse of the system and done so at your own risk.

PYROTRONIX Show Control Systems GmbH Germany cannot be held responsible for any harm caused by the misuse, improper electrical connection, failure to properly maintain, improper handling of pyrotechnics and fireworks or deviation from the procedures outlined in **ptx system** user manual.

## 2 Description of ptx C4

ptx C4 ignition system is designed and developed especially for professional show application. Ptx C4 is equipped with an illuminated programming touch screen display. Operation advices and handling information will be shown at the display. Menu navigation is possible in different languages. Radio and wire components can be combined. The internal Lithium Ionic battery allows working independent from main power supply.

**Please notice the advice for charging the battery. As soon as battery signal on top of the touch screen display changed to red, battery has to be charged. Please connect MAIN POWER with main power supply. If you don't charge, battery can be damaged.**

### 2.1 Display and function keys



USB	⇒	Connection for USB stick
ON/OFF	⇒	Main power switch
Set	⇒	Key to activate safety zone and reserve ignition
Key Switch	⇒	Key switch to release ignition power
Start	⇒	Key to start show
Man Fire	⇒	Key for manual ignition

## 2.2 Connections



- Dead man**   ⇒  **Input Dead man**
- TC OUT**    ⇒  **Output internal Time Code**
- TC IN**     ⇒  **Input external Time Code**
- Antenna**    ⇒  **Antenna socket**
- Freq**       ⇒  **16 different adjustments for frequency**

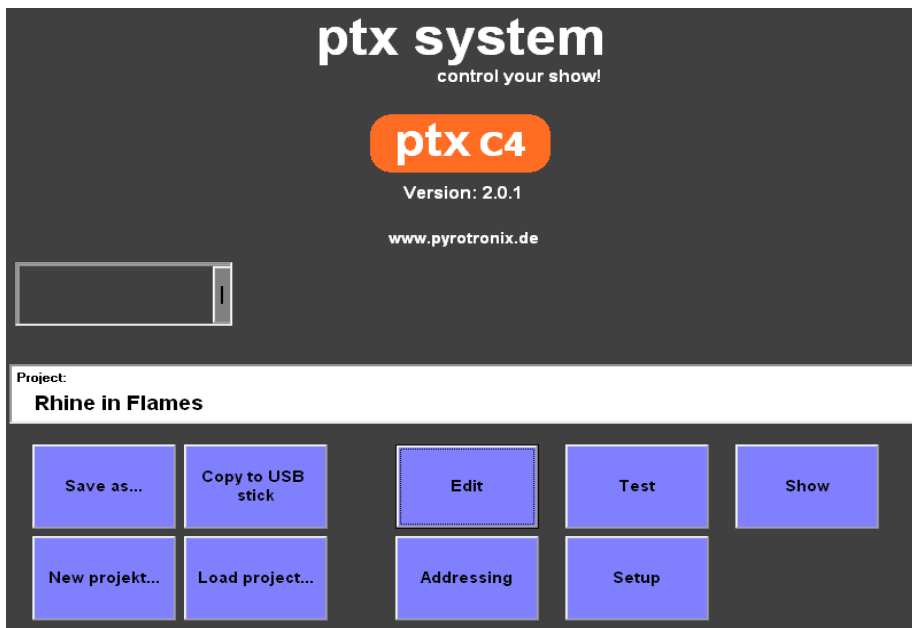


- OUT 1**       ⇒  **Output 1 ptx data**
- OUT 2**       ⇒  **Output 2 ptx data**
- Reset**       ⇒  **System reset**
- Main Power** ⇒  **Input main power supply**
- Fuse**       ⇒  **2A**

### 3 Menu

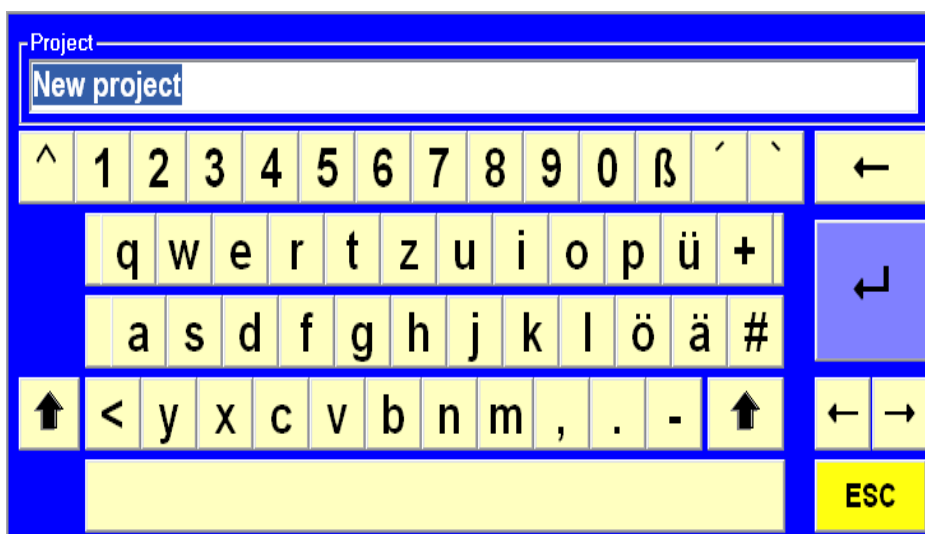
The big touch screen display is the programming unit. Projects can be saved, copied and processed. ptx system set up can be tested and the firework can be started.

The version No. will be shown – important for requests. Current time, active project and capacity of internal battery will be shown in the top line.



#### 3.1 New project

After pushing **New project** it is possible to input the name of the project with the keyboard. After pushing **ESC** the main menu appears.





## 3.2 Load project

There are two possibilities to download projects; one is to download projects saved on ptx C4, the other one is to download from USB stick.

PTX-C4 - Load project

Project	Last Modifikation
Allianz Arena - manuelle Zündung	02-Feb-2010 17:21:01
Rhein in Flammen	04-Feb-2010 12:35:37
Rhine in Flames	04-Feb-2010 14:07:39
test1	03-Feb-2010 12:43:26

Controller USB stick ▲ ▼ ✘ Load ESC

## 3.3 Load project from PTX C 4

After pushing **Download project** a window is opening. All on PTX C4 saved projects, name of projects, date of last handling and duration are shown in the field.

Search the list with the arrow keys ▲ and ▼. Search favoured project – it is marked by a blue bar. By pushing **Load** the active project is released for use.

After pushing **ESC** the main menu appears.

## 3.4 Load project from USB Stick

After pushing **USB Stick** a window is opening. All on USB stick saved projects, name of projects, date of last handling and duration are shown in the field.

Search the list with the arrow keys ▲ and ▼. Search favoured project – it is marked by a blue bar. By pushing **Load** the actual project is released for use.

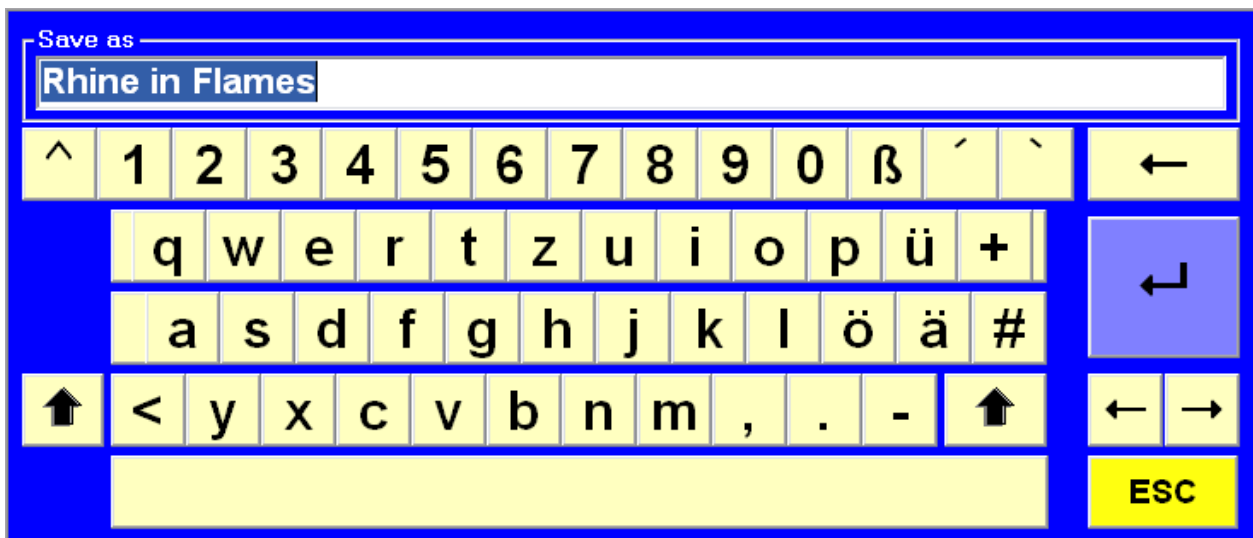
After pushing **ESC** the main menu appears.

### 3.5 Delete project

After pushing **X** the marked project will be deleted. After pushing **ESC** the main menu appears.

### 3.6 Save as

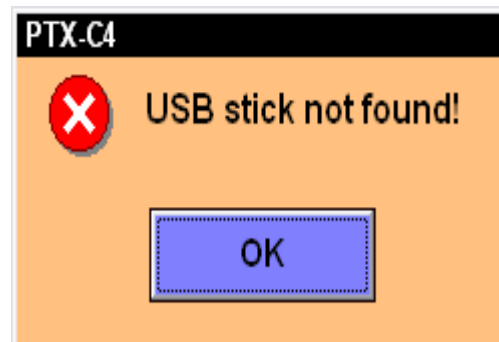
After pushing **Save as** it is possible to input the name of the project with the keyboard. After pushing **ESC** the main menu appears.



### 3.7 Save on USB stick

After pushing **Save on USB Stick** it is possible to store.

After pushing **OK** the actual project will be saved on USB Stick



If USB Stick isn't connected, an advice will be shown.

#### 4 Edit – working on active project

After pushing **Edit** a window with the data of the actual project is opening, on top the identification/ name of project. It is possible to input and to change data.


In this menu Ignition No./ cues, Ignition Time, duration, ptx IC Boxes and outgoing Channel, safety Zones and descriptions of Effects are displayed.



Search the list with the arrow keys ▲ and ▼ below and on the right side.

Searched column or line is marked by a blue bar.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A	00:00:00,99	15,00	9	1	stage left	Roman candle gold crackling
2	A	00:00:01,09	3,00	9	2	front	Kamuro gold - silver
3	A	00:00:01,54	4,50	9	6	right	
4	A	00:00:01,68	20,00	9	7	---	Golden rain
5	A	00:00:01,79		8	16	---	
6	A	00:00:03,00		8	1	---	
7	A	00:00:04,00		9	9	entrance left	
8	A	00:00:05,00	60,00	9	8	---	Waterfall
9	A	00:00:06,00		9	3	---	



Insert line(s)...

Insert interval...

Sort list

Find ign. no....  
 Find IC...

Check data

After pushing  the main menu appears.

## 4.1 Ignition No. / cue

After pushing **I. No.** a window with the data of the active project is opening, it is possible to input and to change ignition No. After pushing **OK** the input is confirmed.

After pushing **X** the input is deleted and after pushing **ESC** the main menu appears.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A	00:00:00,99	15,00	9	1	stage left	Roman can
2	A	00:00:01,09	3,00	9	2	front	Kamuro gol
3	A	00:00:01,54	4,50	9	6	right	
4	A	00:00:01,68	20,00	9	7	---	Golden rain
5	A	00:00:01,79		8	16	---	
6	A	00:00:03,00		8	1	---	
7	A	00:00:04,00		9	9	entrance left	
8	A	00:00:05,00	60,00	9	8	---	Waterfall
9	A	00:00:06,00		9	3	---	

Ignition number		
109		
7	8	9
4	5	6
1	2	3
+/-	0	←
OK	X	ESC

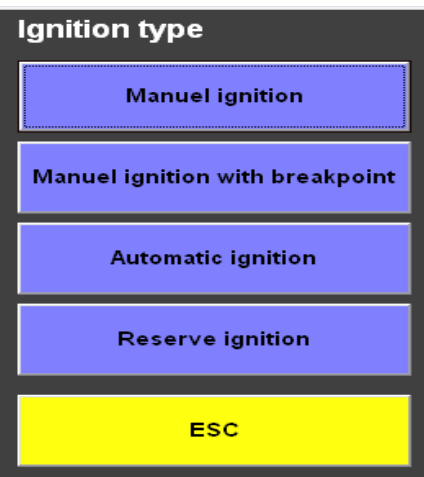
←	↑	Insert line(s)...	Insert interval...	Sort list	Find ign. no.... Find IC...	Check data
---	---	-------------------	--------------------	-----------	--------------------------------	------------

## 4.2 IT.-type of ignition

In this column an ignition is assigned to a category

There are 4 different categories:

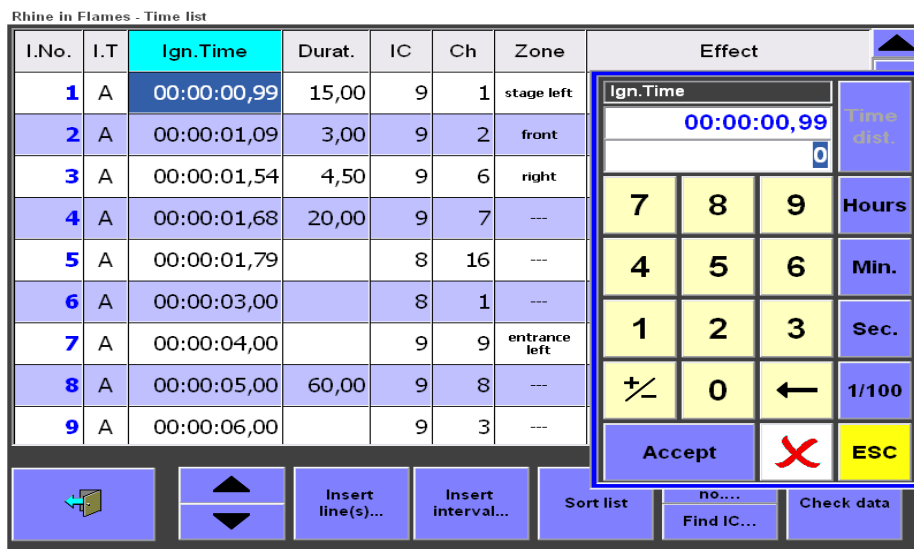
- M**   ⇒   manual ignition
- M.**   ⇒   manual ignition with stop – program stops and has to be started again
- A**    ⇒   automatic ignition
- R**    ⇒   spare ignition – ignition is possible independent from program sequence



### 4.3 Ignition time

After pushing **Ign. Time** it is possible to input and to change ignition time. After pushing **OK** the input is confirmed. After pushing **X** the input is deleted and after pushing **Accept** the input is confirmed. After pushing **←** the input is reseted to zero.

After pushing **ESC** the main menu appears.



00 : 00 : 00 . 00  
hours : minutes : seconds . milliseconds

There are different possibilities to input ignition time:

To input 00:00:00.99 push **9** and **9**, after **1/100** and **ACCEPT** to confirm.

To input only milliseconds pushing **1/100** is always necessary.

00:00:12.53 = 1⇒ 2⇒ 5⇒ 3⇒ ACCEPT

00:59:12.53 = 5⇒ 9⇒ 1⇒ 2⇒ 5⇒ 3⇒ ACCEPT

04:59:12.53 = 4⇒ 5⇒ 9⇒ 1⇒ 2⇒ 5⇒ 3⇒ ACCEPT

Pushing **Hour**, **Min**, **Sec** und **1/100** the time is allocated directly to the time unit.

01:07:01.09 = 1⇒ .Hour.⇒ 7⇒ Min⇒ 1⇒ Sec⇒ 9⇒ 1/100⇒ ACCEPT

00:03:23.00 = 3⇒ Min⇒ 2⇒ 3⇒ Sec⇒ ACCEPT

00:00:01.05 = 1⇒ Sec⇒ 5⇒ 1/100⇒ ACCEPT

## 4.4 Time distance

To input a time distance the ignition times have to be marked. By pushing field 1 to 6 all searched fields are marked with a blue bar. Window **Ignition Time** is opening. By pushing **Time distance** it is possible to input time interval.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect																				
1	A	00:00:00,99	15,00	9	1	stage left	<div style="border: 1px solid black; padding: 5px;"> <p>Ign.Time</p> <p>00:00:00,00</p> <p>Time dist. 0</p> <table border="1"> <tr> <td>7</td> <td>8</td> <td>9</td> <td>Hours</td> </tr> <tr> <td>4</td> <td>5</td> <td>6</td> <td>Min.</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>Sec.</td> </tr> <tr> <td>±/</td> <td>0</td> <td>←</td> <td>1/100</td> </tr> <tr> <td>Accept</td> <td>X</td> <td>ESC</td> <td></td> </tr> </table> </div>	7	8	9	Hours	4	5	6	Min.	1	2	3	Sec.	±/	0	←	1/100	Accept	X	ESC	
7	8	9	Hours																								
4	5	6	Min.																								
1	2	3	Sec.																								
±/	0	←	1/100																								
Accept	X	ESC																									
2	A	00:00:01,09	3,00	9	2	front																					
3	A	00:00:01,54	4,50	9	6	right																					
4	A	00:00:01,68	20,00	9	7	---																					
5	A	00:00:01,79		8	16	---																					
6	A	00:00:03,00		8	1	---																					
7	A	00:00:04,00		9	9	entrance left																					
8	A	00:00:05,00	60,00	9	8	---																					
9	A	00:00:06,00		9	3	---																					

Input e.g. 3 millisecond (3 → 1/100) there is a time interval of 3 milliseconds between all ignition times from 1 to 6.

To input only milliseconds pushing 1/100 is always necessary.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect																				
1	A	00:00:00,99	15,00	9	1	stage left	<div style="border: 1px solid black; padding: 5px;"> <p>Ign.Time</p> <p>00:00:04,00</p> <p>Time dist. 0</p> <table border="1"> <tr> <td>7</td> <td>8</td> <td>9</td> <td>Hours</td> </tr> <tr> <td>4</td> <td>5</td> <td>6</td> <td>Min.</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>Sec.</td> </tr> <tr> <td>±/</td> <td>0</td> <td>←</td> <td>1/100</td> </tr> <tr> <td>Accept</td> <td>X</td> <td>ESC</td> <td></td> </tr> </table> </div>	7	8	9	Hours	4	5	6	Min.	1	2	3	Sec.	±/	0	←	1/100	Accept	X	ESC	
7	8	9	Hours																								
4	5	6	Min.																								
1	2	3	Sec.																								
±/	0	←	1/100																								
Accept	X	ESC																									
2	A	00:00:01,02	3,00	9	2	front																					
3	A	00:00:01,05	4,50	9	6	right																					
4	A	00:00:01,08	20,00	9	7	---																					
5	A	00:00:01,11		8	16	---																					
6	A	00:00:01,14		8	1	---																					
7	A	00:00:04,00		9	9	entrance left																					
8	A	00:00:05,00	60,00	9	8	---																					
9	A	00:00:06,00		9	3	---																					

After pushing **Accept** the input is confirmed. After pushing **X** the input is deleted. After pushing **ESC** the main menu appears.

## 4.5 Adjusting total time

To adjust the total time double click **Ignition Time** on top of the menu bar, the column will be marked blue. To input 1 hour push 1 ⇒ Hours ⇒ ACCEPT, 1 hour will be added to the total time.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A	01:00:00,99	15,00	9	1	stage left	
2	A	01:00:01,02	3,00	9	2	front	
3	A	01:00:01,05	4,50	9	6	right	
4	A	01:00:01,08	20,00	9	7	---	
5	A	01:00:01,11		8	16	---	
6	A	01:00:01,14		8	1	---	
7	A	01:00:04,00		9	9	entrance left	
8	A	01:00:05,00	60,00	9	8	---	
9	A	01:00:06,00		9	3	---	

Ign.Time			Time dist.
+ 01:00:00,00			
1			Hours
7	8	9	Min.
4	5	6	Sec.
1	2	3	1/100
+/-	0	←	
Accept		✗	ESC

		Insert line(s)...	Insert interval...	Sort list	no....	Find IC...	Check data
--	--	-------------------	--------------------	-----------	--------	------------	------------



## 4.6 Addressing of ptx IC Box

After pushing **IC** searched ptx IC boxes with all allocated ignition No./cues and safety zones are displayed. It is possible to correct input and allocate free outgoing channel.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A	01:00:00,99	15,00	9	1	stag	
2	A	01:00:01,02	3,00	9	2	fre	
3	A	01:00:01,05	4,50	9	6	ric	
4	A	01:00:01,08	20,00	9	7		
5	A	01:00:01,11		8	16		
6	A	01:00:01,14		8	1		
7	A	01:00:04,00		9	9	entr le	
8	A	01:00:05,00	60,00	9	8		
9	A	01:00:06,00		9	3		

Addressing: Ignition number 3

◀		IC	9	▶
8	8		16	
7	4		15	
6	3	4	14	
5	28		13	24
4	20		12	23
3	9		11	22
2	2	10	10	22
1	1	2	9	7 3

Accept X ESC

Search ptx IC box with arrow keys ◀ and ▶, or search by pushing the number of ptx IC in the blue field. Input the number of ptx IC. After pushing **Accept** the input is confirmed. After pushing **X** the input is deleted. After pushing **ESC** the main menu appears.

IC

20

7	8	9
4	5	6
1	2	3
+/-	0	←
OK	X	ESC

## 4.7 Addressing of ptx Stepper

By pushing the field **IC** the display change to **Stepper**, in the column the stepper will be marked with a colon. It is possible to program 16 different intervals, max. 1sec, min. 0,01sec or ignite all 16 channels at the same time.

Allocation of ignition No. to an outgoing channel defines the interval. The time will be shown in the column, the picture below shows an example: stepper No. 2 will start at ignition No: 6 (00:00:11,00), the interval between the outputs is 1sec.

In the list Stepper will be marked with a double point.

Boltenhagen - Ostsee - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zc
4	A	00:00:09,00	15,00	5	6	
5	A	00:00:10,00	4,00	12	15	
6	A	00:00:11,00	15,00	:2	1	
7	A	00:00:43,48	4,00	12	13	
8	A	00:00:48,10	4,00	12	8	
9	A	00:00:50,31	4,00	12	4	
10	A	00:00:52,73	4,00	12	2	
11	A	00:00:55,33	15,00	5	3	
12	A	00:00:57,33	4,00	15	1	

Addressing: Ignition number 6

Stepper 2	
300 ms	0 ms
400 ms	10 ms
500 ms	20 ms
600 ms	40 ms
700 ms	60 ms
800 ms	80 ms
900 ms	100 ms
1 Sec	200 ms

6

Accept X ESC

Sort list Search ign. no.... Search IC... Check data

The next example shows a stepper, starting at ignition time 6, the interval is 0,08sec.

Boltenhagen - Ostsee - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zc
4	A	00:00:09,00	15,00	5	6	
5	A	00:00:10,00	4,00	12	15	
6	A	00:00:11,00	15,00	:2	11	
7	A	00:00:43,48	4,00	12	13	
8	A	00:00:48,10	4,00	12	8	
9	A	00:00:50,31	4,00	12	4	
10	A	00:00:52,73	4,00	12	2	
11	A	00:00:55,33	15,00	5	3	
12	A	00:00:57,33	4,00	15	1	

Addressing: Ignition number 6

Stepper 2	
300 ms	0 ms
400 ms	10 ms
500 ms	20 ms
600 ms	40 ms
700 ms	60 ms
800 ms	80 ms
900 ms	100 ms
1 Sec	200 ms

6

Accept X ESC

Sort list Search ign. no.... Search IC... Check data

It is possible to allocate a safety zone to a stepper – activation of safety zone prevents the starting of stepper. If the stepper is already running, activation has no consequence.

## 4.8 Reserve ignition

Reserve ignition is possible independent from program sequence. To allocate Spare ignitions push field **IT** in the searched line. Push **Spare Ignition**, a window is opening, allocating is possible to 24 key numbers and will be shown in column **Ign. No.** Push **OK** to confirm.

Rotterdam Xena - Kopie 1 - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
13	A	00:01:30,90	17,00	14	4	0	Wasserfall m
13	A	00:01:30,90	17,00	20	4	0	Wasserfall m
14	A	00:01:50,70	30,00	1	5	0	LB 100s, cr
14	A	00:01:50,70	30,00	6	5	0	LB 100s, cr
14	A	00:01:50,70	30,00	11	5	0	LB 100s, cr
15	A	00:02:05,40	14,50	17	5	0	Vulkano bu
0	R	00:02:21,40	4,00	17	6	0	Zylinderbor
17	A	00:02:25,80	15,00	14	5	0	Kugel rot-g
17	A	00:02:25,80	15,00	20	5	0	Kugel rot-g

Key number

+ 0

7	8	9
4	5	6
1	2	3
+/-	0	←
OK	X	ESC

Insert line(s)...    Insert interval...    Sort list    Search ign. no....    Check data

Search IC...

Spare ignitions will be marked with **R**, confirmed with **Accept** and after sorting shown at the end of the list.

Rotterdam Xena - Kopie 1 - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zc
123	A	00:17:03,60	2,00	8	7	
123	A	00:17:03,60	2,00	10	13	
123	A	00:17:03,60	2,00	13	5	
124	A	00:17:04,50	3,50	16	2	
124	A	00:17:04,50	3,50	19	11	
124	A	00:17:04,50	3,50	22	2	
01	R		4,00	17	6	
02	R			22	4	
0						

Addressing: Ignition number R2

8		16	
7		15	
6		14	
5		13	
4	R02	12	
3		11	
2	124	10	
1	120	9	

Accept    X    ESC

Insert line(s)...    Insert interval...    Sort list    Search ign. no....    Check data

Search IC...

## 4.9 Safety zone

By pushing **ZONE** safety zones can be allocated to ignition No. / cue.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
---					1	stage left	Roman candle gold cracking
					2	front	Kamuro gold - silver
					6	right	
					1	---	
					14	---	
					8	---	Waterfall
					3	---	
					2	---	
					1	---	

Below the table is a 'Zones' grid with columns: entrance right, stage left, entrance left, right. Rows contain numbers 05-08, 09-12, 13-15, 16-20, 21-24. A pencil icon, OK, and ESC buttons are also present.

At the bottom are control buttons: Insert line(s)..., Insert interval..., Sort list, Find ign. no..., Find IC..., Check data.

Definition of safety zones is possible by pushing  and also in menu **Setup** (chapter 7).

Rotterdam Xena - Kopie 1 - Setup - Define zones

**Zones**

0							
1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24

Zone 12 is selected. Below is a virtual keyboard with an ESC button.

## 4.10 Description of effects

After pushing **Effect** it is possible to input description of effects with the keyboard.

After pushing **ESC** the main menu appears.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A	00:00:00,99	15,00	9	1	stage left	Roman candle gold crackling
2	A	00:00:01,02	3,00	9	2	front	Kamuro gold - silver
3							Silver Palm

Effect (Row 3 - Ignition number 3)

^ 1 2 3 4 5 6 7 8 9 0 ß ' ` ←

q w e r t z u i o p ü + ↵

a s d f g h j k l ö ä # ↵

↑ < y x c v b n m , . - ↑ ← →

ESC

Insert line(s)... Insert interval... Sort list Find ign. no.... Find IC... Check data

## 4.11 Insert line (s )

There is no limit to insert lines. The searched line has to be marked. By pushing **Insert line(s)** specify the number of lines, they will be integrated ahead of marked line.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A	00:00:00,99	15,00	9	1	stage left	Roman can
2	A	00:00:01,02	3,00	9	2	front	Kamuro gol
3	A	00:00:01,05	4,50	9	6	right	
4	A	00:00:01,14		8	1	---	
5	A	00:00:04,00		9	14	---	
6	A	00:00:05,00	60,00	9	8	---	Waterfall
7	A	00:00:06,00		9	3	---	
8	A	00:00:07,00		8	2	---	
9	A	00:00:08,00		7	1	---	

Number of lines

2

7 8 9

4 5 6

1 2 3

+/- 0 ←

OK ESC

Insert line(s)... Insert interval... Sort list Find ign. no.... Find IC... Check data

## 4.12 Insert interval

By pushing **Insert interval** it is possible to program an interval/ a sequence. Arrangement of **Start Time, Interval, Number of ignition no. and channels per ignition (how many effects)** by pushing the blue fields behind the columns.

System is calculating all data, the end and duration of interval will be shown. After pushing **OK** the input is confirmed. After pushing **ESC** the main menu appears.

The example below shows an interval, starting time at 10,97 sec, the interval is 10ms. There is one outgoing channel per ignition No. Total shots are 100, total duration of interval is 9,90sec, the end of interval is 20,87sec.

The screenshot displays the 'Interval' programming interface. It features several input fields with numerical values and blue buttons for navigation. The fields are: Start time (00:00:10,97), Interval (00:00:00,10), Number of ign.No. (100), Channels per ign.No. (1), End (00:00:20,87), and Interval duration (00:00:09,90). At the bottom, there are two buttons: a blue 'OK' button and a yellow 'ESC' button.

Field	Value	Action
Start time	00:00:10,97	...
Interval	00:00:00,10	...
Number of ign.No.	100	...
Channels per ign.No.	1	...
End	00:00:20,87	
Interval duration	00:00:09,90	

The programmed data of interval will be shown in **Edit Mode** at the beginning of the list. After pushing **Sort list** (chapter 4.13) all data will be integrated

## 4.13 Sort list

Each Column can be sorted. By pushing chosen column on top line, the whole column is marked blue. By pushing **Sort list** the column is sorted in ascending order.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A	00:00:00,99	15,00	9	1	stage left	Roman candle gold crackling
2	A	00:00:01,02	3,00	9	2	front	Kamuro gold - silver
3	A	00:00:01,05	4,50	9	6	right	
4	A	00:00:01,14		8	1	---	
5	A	00:00:04,00		9	14	---	
6	A	00:00:05,00	60,00	9	8	---	Waterfall
7	A	00:00:06,00		9	3	---	
8	A	00:00:07,00		8	2	---	
9	A	00:00:08,00		7	1	---	

The example below shows a list sorted by IC – ptx IC boxes will be shown in ascending order

Rotterdam Xena - Kopie 1 - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
5	A	00:00:41,00	6,30	1	1	0	Doppelschuss silber-Blink
8	A	00:00:53,45	3,80	1	2	0	blau+Silberpfeifen
10	A	00:00:56,20	2,00	1	3	0	Feuertopf, 10 Blitze
11	A	00:00:59,50	35,00	1	4	0	LB25s, rot-goldene Palmen
14	A	00:01:50,70	30,00	1	5	0	LB 100s, crossette bunt+Pfeifen
19	A	00:02:40,30	2,50	1	6	0	Feuertopf, rot-grün Crossette
20	A	00:02:50,50	20,00	1	7	0	Kometenrohr klein, crackling
25	A	00:03:15,00	20,00	1	8	0	LB 70s, crazy blinking willows
31	A	00:04:09,00	45,00	1	9	0	LB80s, Palmblütenfächer

## 4.14 Search ignition No.

After pushing **Search ignition No.** it is possible to input a number and to look for each ignition number in the list. After pushing **Search next** the next entered number appears.  
 After pushing **ESC** the main menu appears.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
14	A	00:00:13,00		8	9	---	
15	A	00:00:14,00		7	2	---	
16	A	00:00:15,00		8	10	---	
17	A	00:00:16,00		8	11	---	
18	A	00:00:17,00		9	4	---	
19	A	00:00:18,00		8	12	---	
20	A	00:00:19,00		8	13	---	
20	A	00:00:19,00		9	10	---	
20	A	00:00:19,00		9	11	---	

Find ign. no....

14

7	8	9
4	5	6
1	2	3
+/-	0	←
Find next		ESC

	▲ ▼	Insert line(s)...	Insert interval...	Sort list	Find ign. no.... Find IC...	Check data
--	--------	-------------------	--------------------	-----------	--------------------------------	------------

## 4.15 Search IC Box

After pushing **Search IC** it is possible to input a number and to look for each ignition number in the list. After pushing **Search next** the next entered number appears.  
 After pushing **ESC** the main menu appears.

Rhine in Flames - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
42	A	00:00:41,00		6	1	---	
43	A	00:00:42,00		6	2	---	
44	A	00:00:43,00		6	3	---	
45	A	00:00:44,00		6	4	---	
46	A	00:00:45,00		6	5	---	
47	A	00:00:46,00		6	6	---	
48	A	00:00:47,00		6	7	---	
49	A	00:00:48,00		6	8	---	
50	A	00:00:49,00		6	9	---	

Find IC...

6

7	8	9
4	5	6
1	2	3
+/-	0	←
Find next		ESC

	▲ ▼	Insert line(s)...	Insert interval...	Sort list	Find ign. no.... Find IC...	Check data
--	--------	-------------------	--------------------	-----------	--------------------------------	------------



## 4.16 Check data

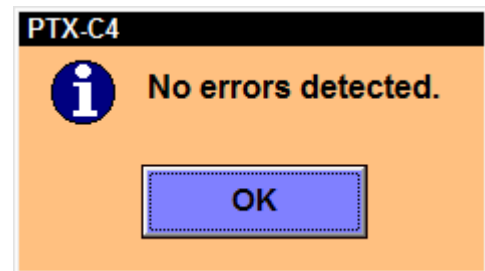
After pushing **Check data** each unassigned ignition number will be shown. If there are no unassigned numbers there is an information **No errors detected**.

After pushing **ESC** the main menu appears.

Rotterdam Xena - Kopie 1 - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A	00:00:00,05	6,00	14	1	1	Blitz mit Komet
1	A	00:00:00,05	6,00	17	1	10	Blitz mit Komet
1	A	00:00:00,05	6,00	20	1	7	Blitz mit Komet
2	A	00:00:10,97	30,00	4	1	8	LB100s, Silbercracking
2	A	00:00:10,97	30,00	9	1	0	LB100s, Silbercracking
3	A	00:00:21,60	24,50	14	2	0	Kometen silber-silber
3	A	00:00:21,60	24,50	20	2	0	Kometen silber-silber
4	A	00:00:25,50	16,00			0	Taiwan silb-cracking
5	A	00:00:41,00	6,30	1	1	0	Doppelschuss silber-Blink

Buttons: Home, Up/Down, Insert line(s)..., Insert interval..., Sort list, Search ign. no..., Search IC..., Check data



## 5 Addressing of IC

This is the menu to program ptx IC boxes, each ignition number is allocated to an outgoing channel of ptx IC box and safety zone. Search ptx IC box with arrow keys ◀ and ▶, or search by inserting the number of ptx IC in the blue field.

After pushing **X** the input is deleted. After pushing the main menu appears.

Rhine in Flames - Addressing

	IC	6
8	49	16
7	48	15
6	47	14
5	46	13
4	45	12
3	44	11
2	43	10
1	42	9

X

Rotterdam Xena - Kopie 1 - Addressing

	IC	5
8	110	16
7	108	15
6	104	14
5	102	13
4	101	12
3	93	11
2	85	10
1	81	9

I.No. => Channel 16  
115

7	8	9
4	5	6
1	2	3
+/=	0	←

OK ESC

X

## 5.1 Addressing of ptx Stepper

By pushing the blue field **IC** the display changes to stepper. In the column the stepper will be marked by colon. It is possible to program 16 different intervals, max. time distance is 1sec, min. time distance is 0,01sec. To ignite all 16 outputs together is also possible.

Allocation of ignition No. defines the interval between the single channels, time distance will be shown in the column next to the input.

In the list Stepper will be marked with a double point.

Boltenhagen - Ostsee - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zc
4	A	00:00:09,00	15,00	5	6	
5	A	00:00:10,00	4,00	12	15	
6	A	00:00:11,00	15,00	:2	1	
7	A	00:00:43,48	4,00	12	13	
8	A	00:00:48,10	4,00	12	8	
9	A	00:00:50,31	4,00	12	4	
10	A	00:00:52,73	4,00	12	2	
11	A	00:00:55,33	15,00	5	3	
12	A	00:00:57,33	4,00	15	1	

**Addressing: Ignition number 6**

◀ Stepper 2 ▶

300 ms		0 ms	
400 ms		10 ms	
500 ms		20 ms	
600 ms		40 ms	
700 ms		60 ms	
800 ms		80 ms	
900 ms		100 ms	
1 Sec	6	200 ms	

Accept ✗ ESC

◀ ▶ ↑ ↓ Insert line(s)... Insert interval... Sort list Search ign. no.... Search IC... Check data

In the next example stepper No. 2 will start at ignition No. 6, interval is 0,08s between the single outputs.

Boltenhagen - Ostsee - Time list

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zc
4	A	00:00:09,00	15,00	5	6	
5	A	00:00:10,00	4,00	12	15	
6	A	00:00:11,00	15,00	:2	11	
7	A	00:00:43,48	4,00	12	13	
8	A	00:00:48,10	4,00	12	8	
9	A	00:00:50,31	4,00	12	4	
10	A	00:00:52,73	4,00	12	2	
11	A	00:00:55,33	15,00	5	3	
12	A	00:00:57,33	4,00	15	1	

**Addressing: Ignition number 6**

◀ Stepper 2 ▶

300 ms		0 ms	
400 ms		10 ms	
500 ms		20 ms	
600 ms		40 ms	
700 ms		60 ms	
800 ms		80 ms	6
900 ms		100 ms	
1 Sec		200 ms	

Accept ✗ ESC

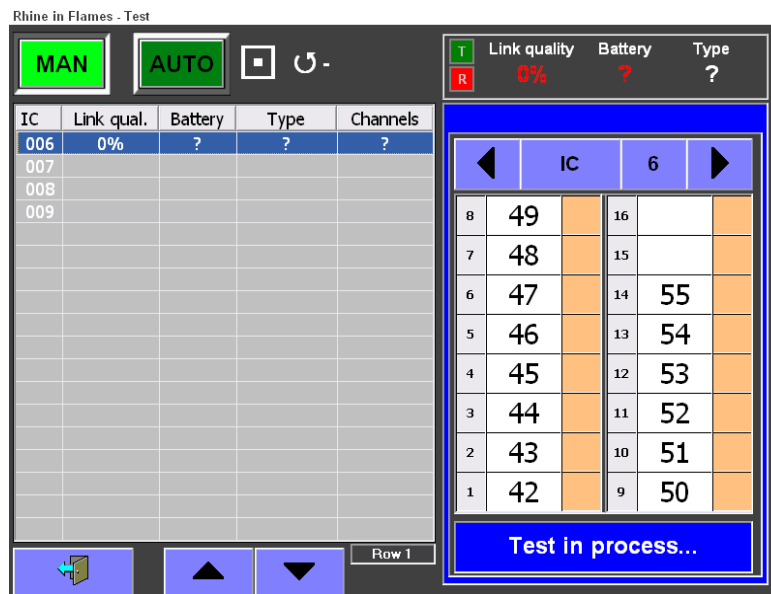
◀ ▶ ↑ ↓ Insert line(s)... Insert interval... Sort list Search ign. no.... Search IC... Check data

It is also possible to allocate a safety zone. Activation of safety zone prevents starting of stepper. Is the stepper already running, activation of safety zone has no consequence

## 6 Test of ptx Ignition Control Box

By pushing Test all connected boxes will be tested. Possible is manual and automatic test mode.

### 6.1 Manual test



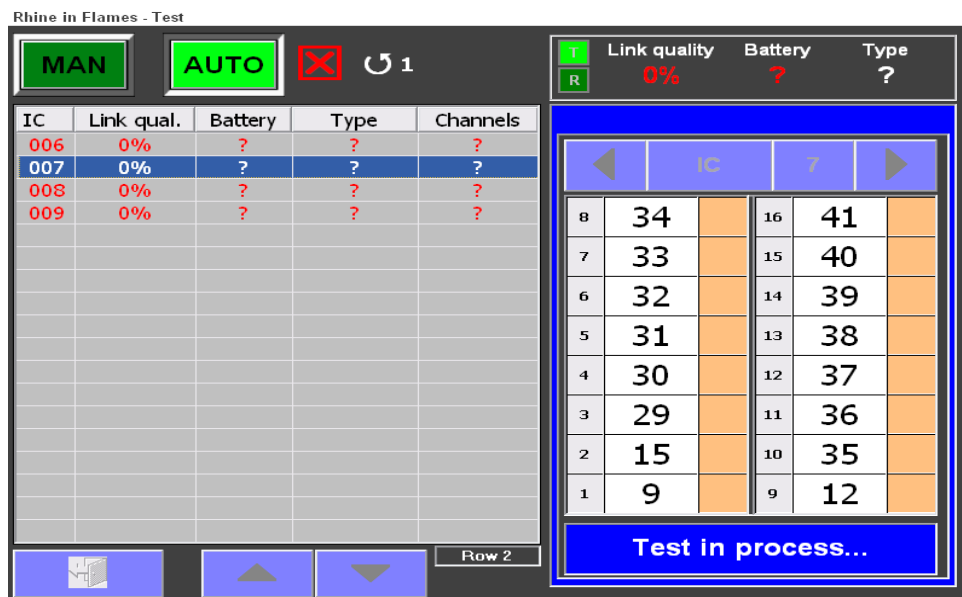
On left side there is a list with all coded ptx IC Boxes. By pushing **MAN** the manual test is starting, the field **MAN** lights up green. On the right side there is the tested ptx IC Box with an indication **Test in process** or **No response**. Search ptx IC box (manual test) with arrow keys ◀ and ▶, or search by inserting the number of IC in the blue field.

After pushing **X** the input is deleted. After pushing ◀ the main menu appears.

#### Categories of testing:

- Quality of linking** ⇒ **T** and **R** (transmit and receive) shows the data communication, lightning up red and green alternately.
- Battery** ⇒ capacity of battery of ptx Radio IC boxes
- Type** ⇒ ptx IC Box or ptx Stepper of each single outgoing channel
- Status** ⇒ Correct connected effect lights up green. Not correct connected effect lights up red, connected effect without programming lights up yellow with an asking sign.

## 6.2 Automatic test



On left side there is a list with all coded ptx IC Boxes. By pushing **AUT** the automatic test is starting, the field **AUT** lights up green. All connected and programmed ptx IC Boxes will be tested automatically.

On the right side there are the tested ptx IC Boxes with an indication **Test is process**. All coded ptx IC Boxes will be tested automatically.

The cross **✗** is a sign of error, the green square **✓** a sign of error free testing. The white arrow key **↻** means, test is running, the number aside is the number of test run.

By pushing **▲ ▼** it is possible to scroll. Asking sign shows error.

By pushing the field with incorrect PTX IC Box, this box will be assigned on the right side.

Categories of testing:

**Quality of linking** ⇨ **T** and **R** (transmit and receive) shows the data communication, lightning up red and green alternately.

**Battery** ⇨ capacity of battery of ptx Radio IC boxes

**Type** ⇨ ptx IC Box or ptx Stepper of each single outgoing **channel**

**Status** ⇨ Correct connected effect lights up green. Not correct connected effect lights up red, connected effect without programming lights up yellow with an asking sign.

After pushing **X** the input is deleted. After pushing **←** the main menu appears.

## 7 Setup

Setup menu is for the basic settings.

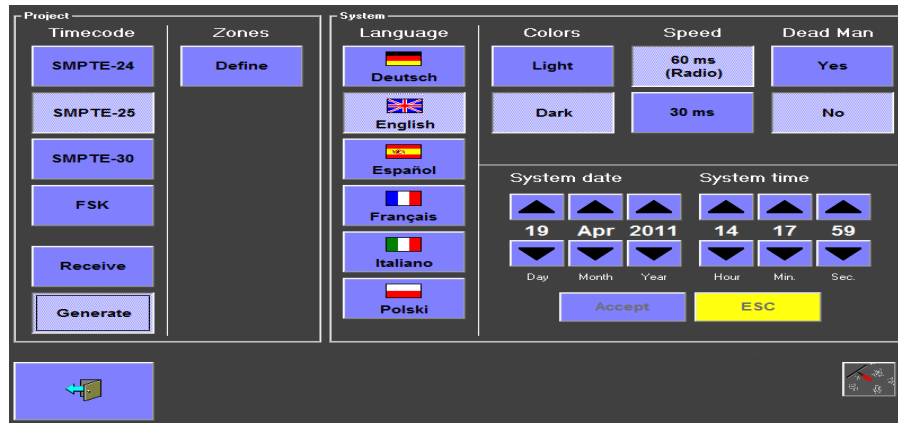
Different time codes (SMPTE 24/ 25/ 30 and FSK), different languages and different screen colours are available. Safety zones can be defined. There is an option for different speed level: 30ms for using only ptx cable components, 60ms for using any kind of ptx radio equipment. By switching on ptx C4 speed level 60ms is automatically selected.

System date and system time are visible and can be changed.

There is also an option for working with or without DEAD MAN, YES or NO is possible.

The grey button below on right side is a cleaning app, by pressing screen becomes dark and with a cloth cleaning is possible.

After pushing  the main menu appears.



### 7.1 Safety zone

By pushing **Define** there are 24 safety zones. After pushing searched field it is possible to input individual description of safety zone.

After pushing **ESC** the main menu appears.

### Zones

---	stage left	entrance left	right	05	06	07	08
09	front	11	12	13	14	15	15
16	17	18	20	21	22	23	24

Zone 13

13	^	1	2	3	4	5	6	7	8	9	0	ß	`	~	←
		q	w	e	r	t	z	u	i	o	p	ü	+		↵
		a	s	d	f	g	h	j	k	l	ö	ä	#		↵
	↑	<	y	x	c	v	b	n	m	,	.	-	↑		← →
															ESC

## 8 Show mode

By pushing **Show** the menu for starting ignition program is opening.

**Ignition No./ cues, Ignition Time, Duration, ptx IC Boxes and outgoing Channels, safety Zones and descriptions of Effects** are displayed.

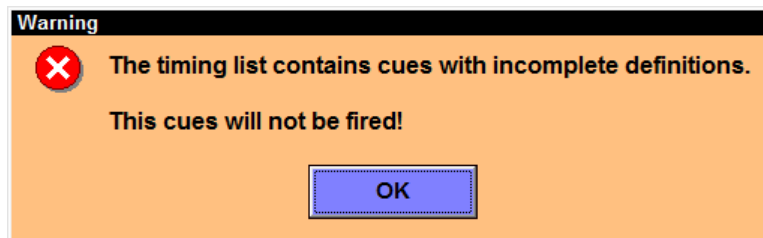
Search the list with the arrow keys ▲ and ▼ below and on the right side.

Rhine in Flames - Show



I.No.	I.T	Ign. Time	Durat.	IC	Ch	Zone	Effect
1	A	00:00:00,99	15,00	9	1	stage left	Roman candle gold cracking
2	A	00:00:01,02	3,00	9	2	front	Kamuro gold - silver
3	A	00:00:01,05	4,50	9	6	right	
4	A	00:00:01,14		8	1	---	
5	A	00:00:04,00		9	14	---	
6	A	00:00:05,00	60,00	9	8	---	Waterfall

If there are unassigned ignition No. there is an information. This information will be also shown directly at columns with uncomplete definitions.



By pushing **Lock zones** and **Res. Ign.** safety zones and spare ignitions can be activated.

On left side there is a display of **Time** and on right side a display of capacity of internal **battery**.

By pushing **Delay** it is possible to input a time delay.

**MAN, AUTO, TC, ARMED** etc. prepare system for ignition.

After pushing  the main menu appears.

## 8.1 Manual ignition

**MAN** and **AUT** are flashing, by pushing **MAN** manual mode is selected.

Rotterdam Xena - Kopie 1 - Show

IC unloaded

Current time 00:00:00,00 Delay

Battery ??? CPort MC:1 CPort IC:3

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
6	A	00:00:42,00	4,00			0	Address not defined! Cue will not be fired!
7	A	00:00:51,40	3,80	4	3	0	blau+Silberpeifen
7	A	00:00:51,40	3,80	9	3	0	blau+Silberpeifen
8	A	00:00:53,45	3,80	1	2	0	blau+Silberpeifen
8	A	00:00:53,45	3,80	6	2	0	blau+Silberpeifen
8	A	00:00:53,45	3,80	11	2	0	blau+Silberpeifen

Preselect next cue Lock zones... Res.Ign....

**ARMed** is flashing red. By pushing **ARMed** field lights up red.

**Key Switch** is flashing green. By activating the key switch, field **Key Switch** lights up green and ignition power is loading. Capacity of ignition power will be shown in a bar **IC loaded**. To get the max. ignition voltage you have to wait 60sec, see status bar **IC loaded**.

Rotterdam Xena - Kopie 1 - Show

Loading IC

Current time 00:00:00,00 Delay

Battery ??? CPort MC:1 CPort IC:3

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A	00:00:00,05	6,00	14	1	1	Blitz mit Komet
1	A	00:00:00,05	6,00	17	1	10	Blitz mit Komet
1	A	00:00:00,05	6,00	20	1	7	Blitz mit Komet
2	A	00:00:10,97	30,00	4	1	8	LB100s, Silbercrackling
2	A	00:00:10,97	30,00	9	1	0	LB100s, Silbercrackling
3	A	00:00:21,60	24,50	14	2	0	Kometen silber-silber

Preselect next cue Lock zones... Res.Ign....



Dead Man and Start are flashing green.

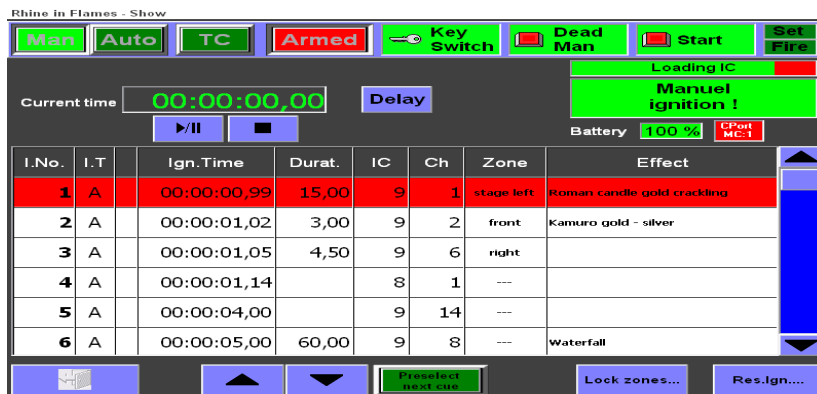
Connect Dead Man. Without Dead Man system is not ready to operate. Dead Man field lights up green.

If handling without Dead Man (NO) is selected in SETUP menu, on screen appears  Dead Man  
Now system is ready to operate without DEAD MAN.

Push Start (pushbutton on the right side) – field lights up green.

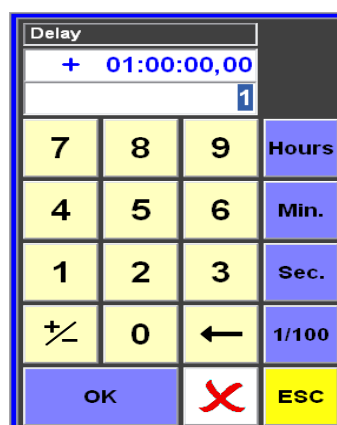
System is ready to start ignition.

Time is flashing – blue fields for Start/ Pause and Stop are ready for operation.



Blue Field **Delay** is ready for operation. By pushing **Delay** a window is opening to program a delay time. Positive and negative numbers are possible. To program negative numbers push first — and after the number. Delay time will be added or subtracted at the total time.

After pushing ← the input will be reset to zero.



After pushing **OK** the input is confirmed. After pushing **X** the input is deleted. After pushing **ESC** the main menu appears.

After starting the internal clock there is a new field to correct the internal time. Every keystroke changes the time 200ms, plus (+) 200ms for making the show faster, minus (-) 200ms for making the show slower. Total delay input will be shown in the column beneath.

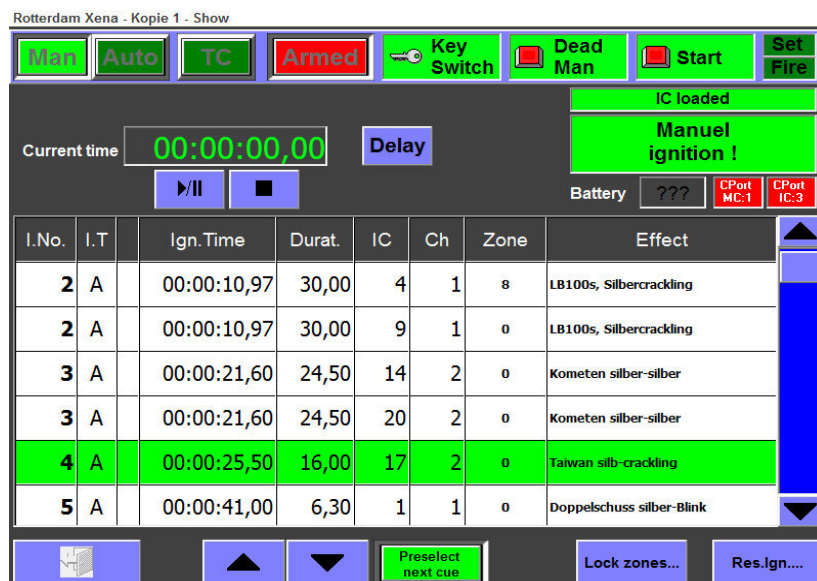


By activating press button **Manual FIRE** first ignition is starting.

By activating press button **Manual FIRE** again next ignition is starting, all ignition No. consecutively.

## 8.2 Preselect ignition No.

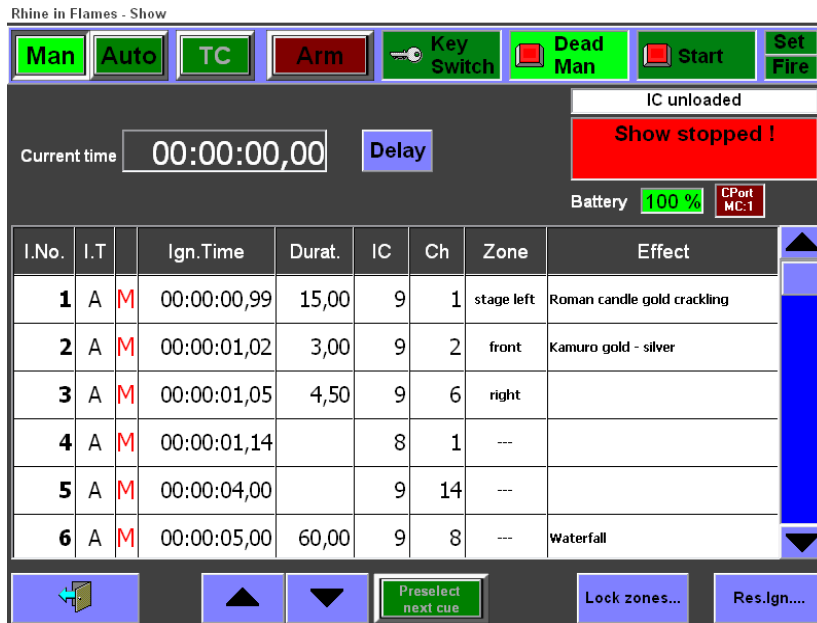
To preselect ignition No. push **Preselect next cue**. Push selected ignition No., field lights up green and press **Manual Fire**.



### 8.3 Stop manual ignition mode

Press button **Start** – field start is not lit. **Key switch** on position **OFF**, field Key switch is flashing green. Push **Armed**, field is flashing red.

Information in the display: Ignition interrupted and Show stopped!



In the column between I.T and Ign.Time there is a report of status of all single ignition No.

**M** means manual ignition successful,

**M** means manual ignition not successful.

Red **#** means a safety zone had been activated, no ignition.

Red **!** means key switch or dead man had been not activated, no ignition.

After pushing  the main menu appears.

## 8.4 Automatic ignition

**MAN** and **AUT** are flashing, by pushing **AUT** automatic mode is selected.

Additional to **Current TIME** there is a column **Ignition in**. **Current Time** is the internal clock, **Ignition in** shows the time to next ignition, marked with a red bar, 3 seconds before next ignition the bar is running.

Blue Field **Delay** is ready for operation. By pushing **Delay** a window is opening to program a delay time. Positive and negative numbers are possible. To program negative numbers push first **-**. Delay time will be added or subtracted to the total time. After pushing **←** the input is reseted to zero. After pushing **OK** the input is confirmed. After pushing **X** the input is deleted. After pushing **ESC** the main menu appears.

Delay			
+ 01:00:00,00			
			1
7	8	9	Hours
4	5	6	Min.
1	2	3	Sec.
÷	0	←	1/100
OK		X	ESC

**TC** (time code) is flashing green and **ARMed** is flashing red.

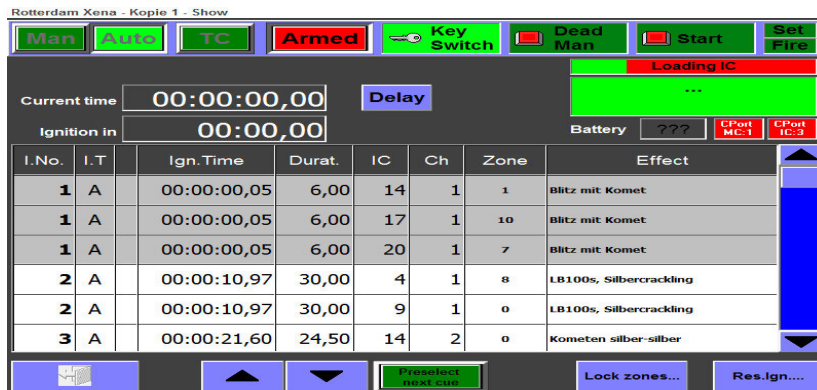
By pushing **ARMed** field lights up red. System is waiting for Key Switch.

I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A	00:00:00,05	6,00	14	1	1	Blitz mit Komet
1	A	00:00:00,05	6,00	17	1	10	Blitz mit Komet
1	A	00:00:00,05	6,00	20	1	7	Blitz mit Komet
2	A	00:00:10,97	30,00	4	1	8	LB100s, Silbercrackling
2	A	00:00:10,97	30,00	9	1	0	LB100s, Silbercrackling
3	A	00:00:21,60	24,50	14	2	0	Kometen silber-silber

**Key Switch** is flashing green. By activating the key switch, field **Key Switch** lights up green and ignition power is loading.

Capacity of ignition power will be shown in a bar **IC loaded**.

To get the max. ignition voltage you have to wait 60sec, see status bar **IC loaded**.



**Dead Man** and **Start** are flashing green.

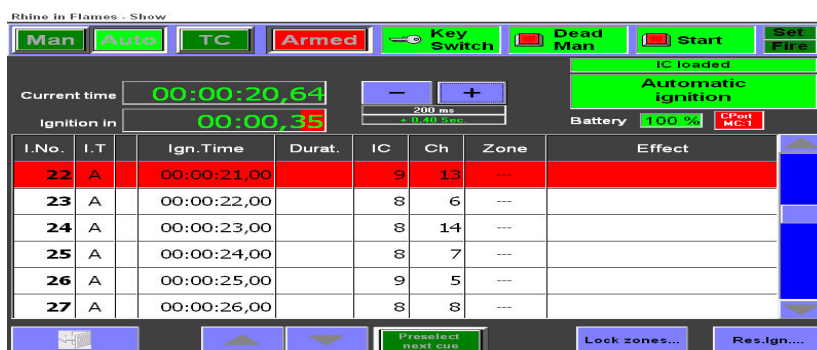
Connect **Dead Man**. Without **Dead Man** system is not ready to operate. **Dead Man** field lights up green.

If handling without Dead Man (NO) is selected in **SETUP** menu, on screen appears  **Dead Man**.  
Now system is ready to operate without **DEAD MAN**.

Push **Start** (pushbutton on the right side) – ignition is starting – field **Start** lights up green.

**Ignition in** shows the time to the next ignition, 3 sec. Before the red bar is running.

During automatic ignition manual ignition is always possible by pushing **Man Fire**.



After starting the internal clock there is a new field to correct the internal time.

Every keystroke changes the time 200ms, plus (+) 200ms for making the show faster, minus (-) 200ms for making the show slower.

Total delay input will be shown in the column beneath.

## 8.5 Break of automatic ignition

Press button **Start** – field start is not lit, show stopped.

Information at the display: **PAUSE**

Press button **Start** again, show is running continuing.

## 8.6 Preselect ignition No.

To preselect ignition No. push **Preselect next cue**. Push selected ignition No., field lights up green and press **Man Fire**. Preselected ignitions are only allowed during **Pause**.

## 8.7 Stop automatic ignition mode

Press button **Start** – field start is not lit, show stopped.

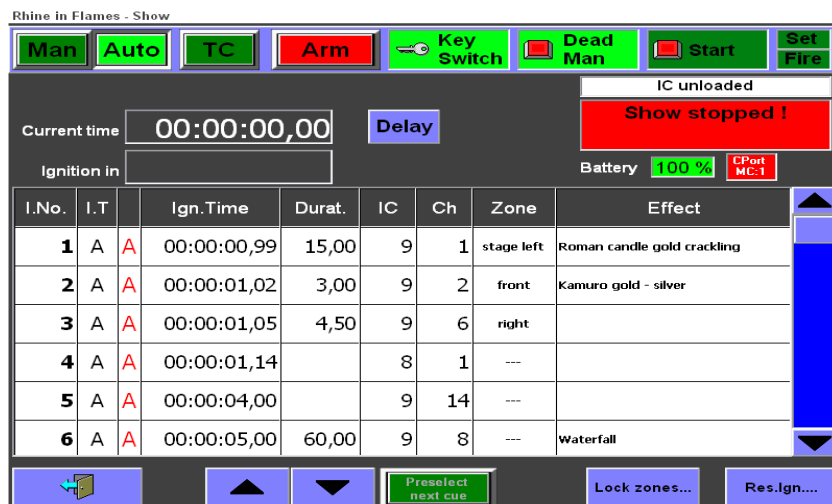
Information at the display: **PAUSE**

**Key switch** on position **OFF**, field Key switch is flashing green.

Push **Armed**, field is flashing red.

Information in the display: **Ignition interrupted and Show stopped!**

Rhine in Flames - Show



I.No.	I.T	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A A	00:00:00,99	15,00	9	1	stage left	Roman candle gold crackling
2	A A	00:00:01,02	3,00	9	2	front	Kamuro gold - silver
3	A A	00:00:01,05	4,50	9	6	right	
4	A A	00:00:01,14		8	1	---	
5	A A	00:00:04,00		9	14	---	
6	A A	00:00:05,00	60,00	9	8	---	Waterfall

In the column between I.T and Ign.Time there is a report of status of all single ignition No.

**M** means manual ignition successful,

**M** means manual ignition not successful.

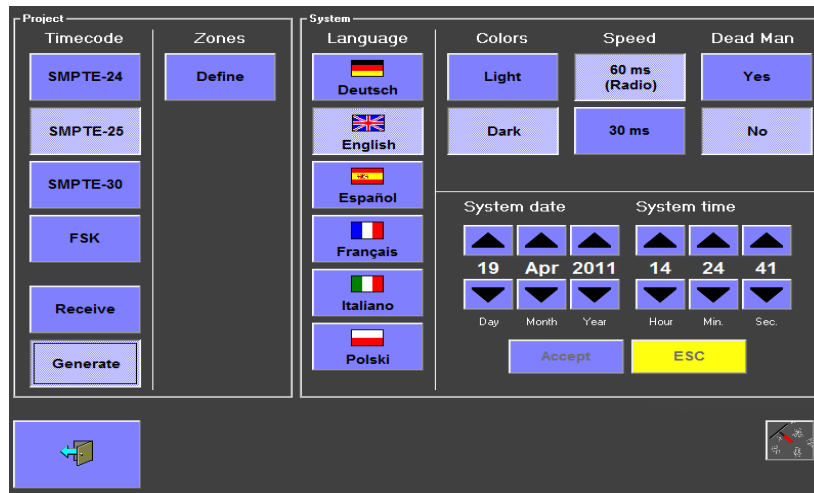
Red **#** means a safety zone had been activated, no ignition.

Red **!** means key switch or dead man had been not activated, no ignition.

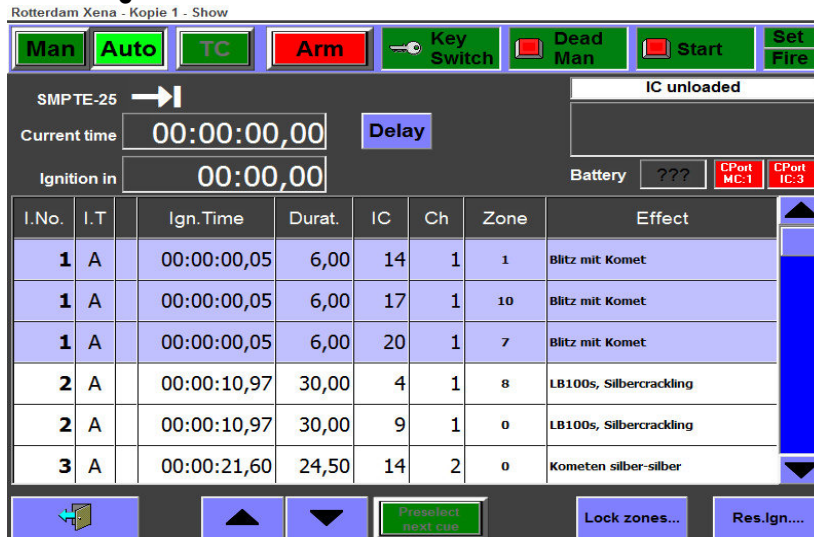
After pushing  the main menu appears.

## 8.8 Automatic ignition with time code generator

Push **Setup** in the main menu. Push selected time code, there are different time Codes, SMPTE 24, SMPTE 25, SMPTE 30 and FSK. Push **Generate** and leave Setup menu.



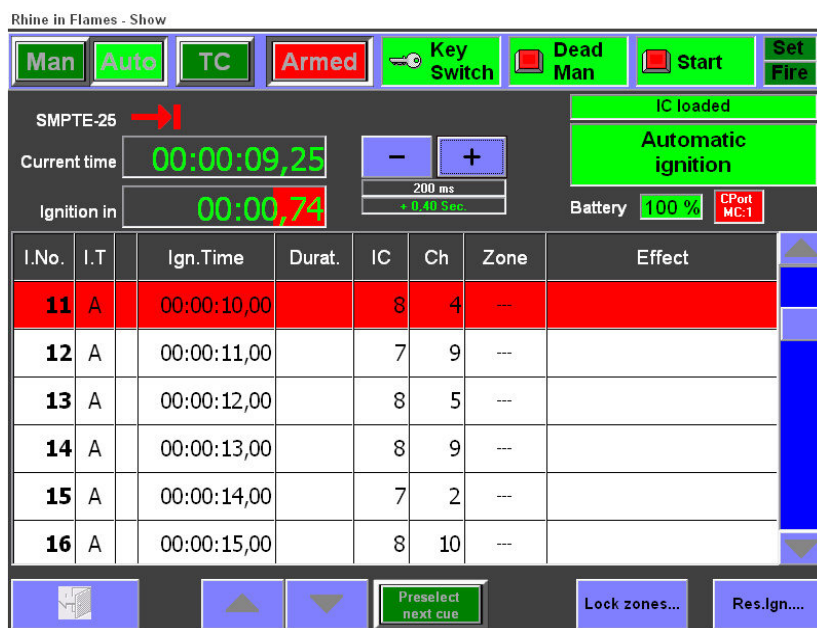
Push **Show** in the main menu. **MAN** and **AUT** are flashing, by pushing **AUT** automatic mode is selected. Additional to **Current TIME** there is a column **Ignition in**. **Current Time** is the internal clock, **Ignition in** shows the time to next ignition, marked with a red bar, 3 seconds before next ignition the bar is running.



Selected time code and an arrow for activated time code generator appears. Blue Field **Delay** is ready for operation. By pushing **Delay** a window is opening to program a delay time. Positive and negative numbers are possible. To program negative numbers push first **-**. Delay time will be added or subtracted to the total time. After pushing **←** the input is reseted to zero.

Push **ARMed**, field lights up red. Arrow for time code generator is flashing red.  
**Key Switch** is flashing green. By activating the key switch, field **Key Switch** lights up green and ignition power is loading. Capacity of ignition power will be shown in a bar **IC loaded**.  
 To get the max. ignition voltage you have to wait 60sec, see status bar **IC loaded**.  
**Connect Dead Man**. Without **Dead Man** system is not ready to operate. **Dead Man** field lights up green. System is ready for ignition.

If handling without Dead Man (NO) is selected in **SETUP** menu, on screen appears  **Dead Man**  
 Now system is ready to operate without **DEAD MAN**.



Push **Start** (press button on right side)— **ignition program is running** - field **Start** lights up green.

After starting the internal clock there is a new field to correct the internal time.  
 Every keystroke changes the time 200ms, plus (+) 200ms for making the show faster, minus (-) 200ms for making the show slower. Total delay input will be shown in the column beneath.

During automatic ignition manual ignition is always possible by pushing **Man Fire**.

Time Code signal is available at connector **TC OUT**, right side of case.



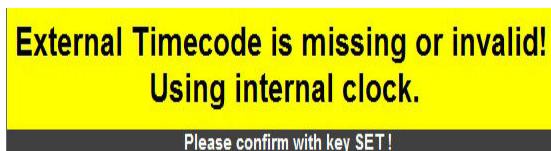
## 8.9 External Timecode - Improved recognition of timecode errors

Timecode is an analogue signal which carries time and date information. This signal is used to synchronize different systems to one master clock.

If the signal gets disturbed (e.g. bad connectors, electromagnetic disturbance, etc.) timecode errors may occur and cause the timecode to be wrong or invalid.

This updates improves the way and speed, ptx C4 controller detects such a disturbance as followed:

If a timecode bounces more than up to  $\pm 150$ ms, or is lost completely, the controller stops synchronizing to the timecode immediately and automatically continues on its internal clock. The **TC** button at the top of the screen is deactivated at the same time. The following message will appear on the screen:



To confirm this message, the operator has to press the **SET** Key on the front panel of the ptx C4 controller, after confirming the advice disappears.

Whenever an invalid timecode has been detected, the current deviation between the internal clock and the timecode clock is displayed right next to timecode display.



A deviation less than  $\pm 60$  seconds allows the operator to resync to the timecode by pressing the **TC** Key at the top of the screen again, key TC lights up green. The controller will then jump to the current timecode position and continue from there.

A deviation greater than  $\pm 60$  seconds will be considered a major and unrecoverable timecode error. In this case, it won't be possible to resync to the timecode signal, show automatically continues on its internal clock. Instead, the following message will be displayed:

Timecode deviation too big.  
Unable to resync with timecode.

Please confirm with key SET!

The advice has to be confirmed with push button SET by operator, after confirming the advice disappears.

In addition to that, a special routine handles timecode errors that occur right at the beginning of a show.

If the first timecode frame that comes in is greater than 300ms than the first ignition No./ cue, the SHOW WILL NOT START automatically and the following message will be displayed:

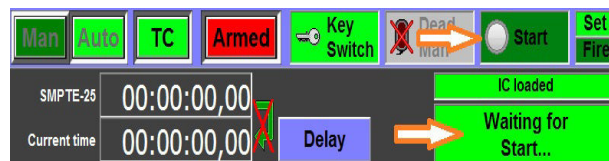
Timecode start value too large !

Please confirm with key SET!

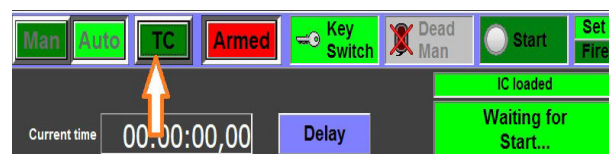
The advice has to be confirmed with push button SET by operator, after confirming the advice disappears.

After confirming the message by pressing the SET Key on the front panel of ptx C4 controller, the operator has to perform the following steps to start the show anyway:

Press the START Key so the status display says „Waiting for Start“.



Press the TC Button at the top of the screen to deactivate the timecode synchronization.



Press the START Key again to actually start the show **WITHOUT TIMECODE**. You can either use the +/- 200ms Buttons or the delay function to get in sync with other devices (e.g. audio, lights, etc.) again manually.

## 8.10 Interruption of automatic ignition mode with time code generator

Press button **Start** (on right side) – field start is not lit, show stopped.

Information at the display: **PAUSE**

Press button **Start** again, show is starting again.

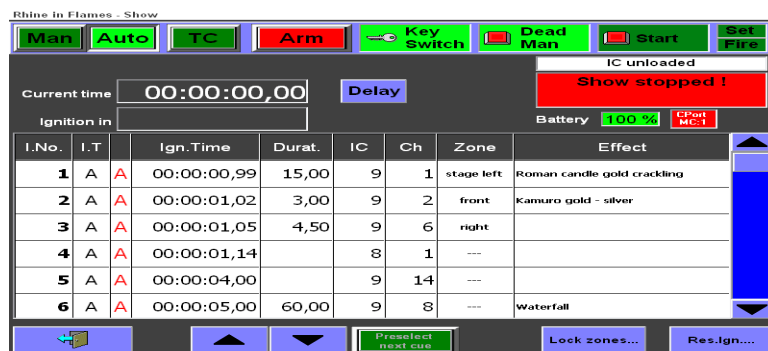


## 8.11 Preselect ignition No.(automatic mode)

To preselect ignition No. push **Preselect next cue**. Push selected ignition No., field lights up green and press **Man Fire**. Preselected ignitions are only allowed during **Pause**.

## 8.12 Stop automatic ignition with time code generator

Press button **Start** – field start is not lit, show stopped. Information at the display: **PAUSE**  
**Key switch** on position **OFF**, field Key switch is flashing green. Push **Armed**, field is flashing red. Information in the display: **Ignition interrupted** and **Show stopped!**



In the column between I.T and Ign.Time there is a report of status of all single ignition No.

**M** means manual ignition successful,

**M** means manual ignition not successful.

Red **#** means a safety zone had been activated, no ignition.

Red **!** means key switch or dead man had been not activated, no ignition.

After pushing the main menu appears.

## 8.13 Automatic ignition with external time code

Push **Setup** in the main menu. Push selected time code. Push **Receive** and leave Setup Menu.



Push **Show** in the main menu.

**MAN** and **AUT** are flashing, by pushing **AUT** automatic mode is selected.

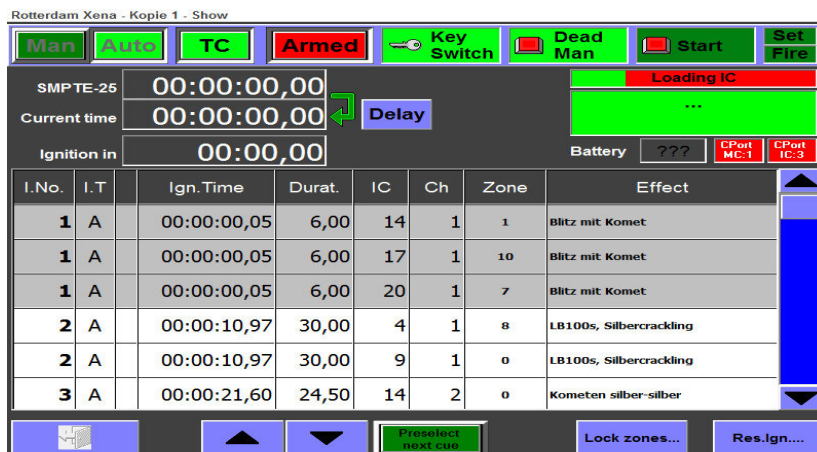
Additional to **Current Time** there is a column **Ignition in**. **Current Time** is the internal clock, **Ignition in** shows the time to next ignition, marked with a red bar, 3 seconds before next ignition the bar is running. Also additional is a column for timecode, selected time code will be shown.

**Blue Field Delay** is ready for operation. By pushing **Delay** a window is opening to program a delay time. Positive and negative numbers are possible. To program negative numbers push first **-**. Delay time will be added or subtracted to the total time.

**TC** (time code) is flashing green and **ARMed** is flashing red.

Push **TC** – a new column for time code, information about selected time code is shown.

Push **ARMed**, field lights up red.



**Key Switch** is flashing green. By activating the key switch, field **Key Switch** lights up green and ignition power is loading. Capacity of ignition power will be shown in a bar **IC loaded**. To get the max. ignition voltage you have to wait 60sec, see status bar **IC loaded**.

**Dead Man** and **Start** are flashing green. Connect **Dead Man**. Without **Dead Man** system is not ready to operate. **Dead Man** field lights up green.

If handling without Dead Man (NO) is selected in **SETUP** menu, on screen appears  **Dead Man**  
Now system is ready to operate without **DEAD MAN**.

Push **Start** (pushbutton on the right side) – system is ready to start ignition – field **Start** lights up green. System is waiting for time code – as soon as time code will receive, ignition program will start.

Activating or deactivating external time code signal in running ignition program is always possible. If there is a difference between time code and internal clock time code will be marked red. If external time code signal is deactivated, internal clock is running.



After starting the internal clock there is a new field to correct the internal time. Every keystroke change the time 200ms, plus (+) 200ms to run the show faster, minus (-) 200ms to run the show slower. Total delay input will be shown in the column beneath.

**8.14 Interruption of automatic ignition mode with external time code**  
Press button **Start** – field start is not lit, show stopped. Information at the display: **PAUSE**  
Press button **Start** again, show is starting again.

## 8.15 Preselect ignition No.(automatic mode)

To preselect ignition No. push **Preselect next cue**. Push selected ignition No., field lights up green and press **Man Fire**. Preselected ignitions are only allowed during **Pause**.

## 8.16 Stop automatic ignition with external time code

Press button **Start** – field start is not lit, show stopped. Information at the display: **PAUSE Key switch** on position **OFF**, field Key switch is flashing green. Push **Armed**, field is flashing red. Information in the display: **Ignition interrupted** and **Show stopped!**

Rhine in Flames - Show

I.No.	I.T.	Ign.Time	Durat.	IC	Ch	Zone	Effect
1	A A	00:00:00,99	15,00	9	1	stage left	Roman candle gold crackling
2	A A	00:00:01,02	3,00	9	2	front	Kamuro gold - silver
3	A A	00:00:01,05	4,50	9	6	right	
4	A A	00:00:01,14		8	1	---	
5	A A	00:00:04,00		9	14	---	
6	A A	00:00:05,00	60,00	9	8	---	Waterfall

In the column between I.T and Ign.Time there is a report of status of all single ignition No.

**M** means manual ignition successful,

**M** means manual ignition not successful.

Red **#** means a safety zone had been activated, no ignition.

Red **!** means key switch or dead man had been not activated, no ignition.

After pushing the main menu appears.

## 9 Activating safety zone

To activate and deactivate safety zones in show mode push press button SET (left side) and field Lock Zones together. A window with 24 safety zones is opening.

Push the selected zone. (To program Safety zones look chapter 4.9 and 7.1)

Activated safety zone ⇨ white field ⇨ no ignition for assigned channel

Deactivated safety zone ⇨ orange field ⇨ ignition for assigned channel

It is possible to activate and deactivate safety zones during the running ignition program.

Push ESC to close the window.

I.No.	I.T	Ign.Time	Durat.	IC	Ch
17	A	00:00:16,00		8	11
18	A	00:00:17,00		9	4
19	A	00:00:18,00		8	12
20	A	00:00:19,00		8	13
20	A	00:00:19,00		9	10
20	A	00:00:19,00		9	11

## 10 Activating reserve ignition

To activate reserve ignitions in show mode push press button SET

(left side) and field Reserve Ignitions together. A window with 24 Reserve Ignitions is opening.

All programmed reserve ignitions will be shown. (To program reserve ignition look chapter 4.8) Push the selected reserve ignition.

Activated selected reserve ignition ⇨ push FIRE ⇨ effect is ignited

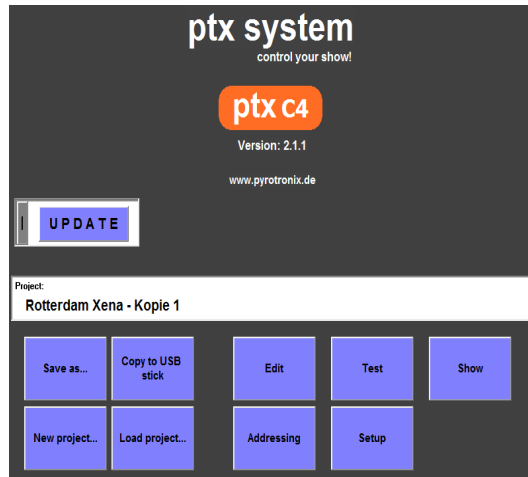
Igniting of reserve ignition is possible before starting and during the show.

Push ESC to close the window.

I.No.	I.T	Ign.Time	Durat.	IC	Ch
1	A	00:00:54,86	0,00	13	6
2	A	00:00:56,65	0,00	2	4
2	A	00:00:56,65	0,00	31	12
3	A	00:00:59,30	0,00	14	13
4	A	00:01:02,89	3,00	25	2
5	A	00:01:05,33	0,00	19	14

## 11 Update

Updates will be saved on USB stick. To load an update connect the USB Stick with ptx C4. Unlock the slide switch and press 3sec.



There is an advice, if USB stick is connected or not and if an update is available or not.

USB stick connected	⇒		USB stick not connected	⇒	
Update available	⇒		Update not available	⇒	

By pushing **START** the Update will be loaded, effective version No. will be shown.



## 12 Specifications

Ignition Times	3.200
Outputs	3.200
Ignitions simultaneous	32.000
Igniter max.	128.000
Shot sequence	min. 0,03s
Stepper sequence	min. 0,01s
Range	1000- 5000m
Frequency	869MHz, 915MHz
Transmission Power	150mW
Time Code	SMPTE 24 - 25 - 30/ FSK
Input	110/230V AC - 50/60Hz
Output	70V DC
Fuse	2A
Weight	8.120g
Dimensions (L x H x B) mm	400 x 180 x 140

**Please notice the advice for charging the battery. As soon as battery signal on top of the touch screen display changed to red, battery has to be charged. Please connect MAIN POWER with main power supply. If you don't charge, battery can be damaged.**

From August 1, 2011 we offer a new frequency for some countries outside of Europe. New frequency is 915MHz, setting is with frequency switch, position F.  
From this day all ptx radio devices will be delivered with this setting.